

From: Stephen Arthur <sxarthur@shaw.ca>
Sent: Thursday, July 28, 2016 1:42 PM
To: 'nick.lane@ucl.ac.uk'
Subject: **Lack of momentum for alkaline vents theory of abiogenesis?**

Importance: High

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Dear Dr. Lane,

I'm hoping that you will be so kind as to answer this question: Why is your comprehensive theory of abiogenesis in alkaline vents (*Life Ascending*) not universally acclaimed by now and investigated by all researchers in this field? Instead, I find a very disappointing reception displayed in all recent books addressing abiogenesis, as follows:

Bill Mesler (journalist) and James Cleaves (geochemist/astrobiologist), 2016, *A Brief History of Creation: Science and the Search for the Origin of Life*: The Preface sets up Mike Russell as the current celebrity of abiogenesis theory, only to suggest that his theory will likely prove to be as erroneous as Stanley Miller's—and at the end of their long chronology they don't even return to Russell and the vents, having only established that the pores in the deep ocean would be a safe incubator.

Franklin Harold, 2014, *In Search of Cell History*: Harold does give a concise one-page summary (pp 181) but says he cannot see how such protocells could have evolved without competition among free-living units and that your theory contradicts evidence that LUCA had redox pathways and ATPases.

Adam Rutherford, 2013, *Creation*: Even Rutherford in his longer exposition paints only part of the picture and doesn't seem to fully understand the sequence of events that you propose.

Kevin Plaxco (chemist) & Michael Cross (writer), 2011, *Astrobiology: A Brief Introduction*: The authors mention Martin and Russel but are totally unaware of alkaline vents and the reverse Krebs cycle, etc., and how natural PCR solves the stated problem of origin of an RNA world.

Chris Impey (editor, astronomer), 2011, *Talking About Life: Conversations on Astrobiology*: All 37 interviewees, including Steve Benner and John Baross, avoid the idea of alkaline vents entirely.

Finally, when your theory is mentioned, reviewers often cite the paucity of experimental support—as if experimental support for other very-partial hypotheses is any better!

Was Max Planck correct in saying that often “a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it”?

My impression is that other researchers have staked their career on one fragment of the whole puzzle and refuse to consider a whole integrated model (the only one), remaining stubbornly biased. For example, Cleaves must be well informed but might be biased by his work on abiogenesis in ice (<https://www.gl.ciw.edu/bios/hicleaves>). Similarly, Steve Benner is an expert in this area, but in 2013 he proposed yet again life from Mars, a hypothesis because of his work on molybdenum oxide in the origin of ribose and his study of boron stabilizing RNA in water. John Baross, co-author with Russell and Martin in 2008, as interviewed in depth in *Talking About Life*, does allude to metal-mineral catalysts generating the Krebs cycle but omits any mention of alkaline vents (and chemiosmosis) entirely—perhaps edited out because he failed to make it a strong point to the interviewer. Even field work on abiogenesis in hydrothermal vents is still looking in the wrong place; in 2014 Woods Hole researchers investigated black smokers for methanethiol as a precursor.

I'm wondering how this barrier may be breached, and so your impression of what's going on would be greatly appreciated. Please be assured that I will not disseminate your reply; it will be kept confidential unless you express permission otherwise. This query is for my own personal interest because I feel privileged to be alive at the time when the question of the origin of life has actually been answered.

Thank you.

Cordially,

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* I help overloaded clinicians and researchers to communicate their findings and obtain funding for new research.

* With minimal guidance, I deliver comprehensively structured, polished manuscripts that are optimized for impact.

* In the fierce competition for grants, I practice the art of creating an alluring and scientifically sound grant proposal, ensuring that the quality of the writing does not prevent the application from being funded.